

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph on page 1, lines 5 through 8, with the following amended paragraph:

The present invention relates to a circuit for selecting a channel in a communication (transmission-receiving) system having a plurality of channels such as a ~~TDMA~~ Time Division Multiple Access (TDMA) system. More particularly, the present invention is directed to a communication channel selecting circuit corresponding to radio signal intensity.

Please replace the paragraph on page 1, lines 9 through 17, with the following amended paragraph:

A PHS Personal Handyphone System (PHS) adopted ~~TDMA-TDD~~ Time Division Multiple Access – Time Division Duplex (TDMA-TDD) system selects one channel from four channels, from CH1 to CH4 (4 channels for receiving and 4 channels for transmission) and performs transmission and receiving. In this TDMA-TDD system, a radio signal received from an antenna is demodulated at a receiving timing, and data is reproduced. To confirm whether the radio signal is able to be demodulated to reproduce the data without deficiencies and has sufficient intensity or not, intensity of a signal, indicating radio signal intensity converted from a radio signal, is measured/monitored at a receiving timing of each of the channels from channel 1 to channel 4.

Please replace the paragraph on page 1, lines 18 through 22, with the following amended paragraph:

The intensity of the signal indicating radio signal intensity is judged at the ~~CPU~~ Central Processing Unit (CPU), the CPU selects a receiving channel indicating the highest intensity and, at the same time, it also selects a transmission channel corresponding to the selected receiving channel. A communication channel is thus selected in the conventional system.

Please replace the paragraph on page 2, lines 1 through 11, with the following amended paragraph:

In this instance, the problem is described with reference, as an example, to a ~~family type extension cordless~~ telephone system ~~a handset of which can transmit and receive~~ information by radio signal. When power is applied to a main telephone of ~~an extension cordless~~ telephone system or the system is reset, the operation starts with a timing of the main telephone. The main telephone, starting its operation, measures the intensity of radio signals at its own receiving timing, and selects the most intensive receiving channel. At the time of measuring, if another similar ~~extension cordless~~ telephone system is in use nearby, the main telephone, newly applying power or resetting the system, measures the radio signal intensity of the channel used by another similar ~~extension cordless~~ telephone system, and selects the same or adjacent channel used by another similar ~~extension cordless~~ telephone system.

Please delete the paragraph starting on page 2, line 24, to page 3, line 9, as follows:

~~To achieve the object described above, in one aspect of the present invention, there are provided a radio unit which outputs a signal indicating radio field intensity of a radio signal received through an antenna at a receiving status and transmits a radio signal to the antenna at a transmission status, a control circuit which sets the radio unit to the receiving status even if the radio unit is at a transmission timing, a timing control circuit which outputs timing signals for each of a plurality of channels at a transmission timing, a register which stores a level of the signal outputted from the radio unit at the signal receiving status in a response to the timing signal, and a communication control circuit which compares the level of signals stored in these registers and selects to communicate in one of the plurality of channels.~~

Please replace the paragraph on page 3, lines 10 through 21, with the following amended paragraph:

Corresponding to the first aspect of the present invention, a communication channel selecting circuit for selecting one of communication channels in which a radio signal is transmitted and received in accordance with a radio signal intensity thereof. The selecting circuit comprises a radio unit outputting an intensity signal indicating the radio signal

intensity of the radio signal received through an antenna in a receiving status and transmitting the radio signal to the antenna in a transmission status, a control circuit setting the radio unit to the receiving status even at a transmission timing and outputting a timing signal for each of the channels during the transmission timing, a register storing a level of the intensity signal outputted from the radio unit in response to the timing signal, and a ~~transmission-receiving control circuit-CPU~~ comparing the level stored in the register and a communication control circuit selecting one of the channels for transmission and receiving.

Please replace the paragraph starting on page 4, line 24, to page 5, line 4, with the following amended paragraph:

An antenna 101, which transmits and receives a radio signal, connects to a radio unit 102. The radio unit 102 converts the radio signal to an RSSI-Receive Signal Strength Indicator (RSSI) signal, which indicates radio signal intensity and is an analog signal, and outputs the RSSI signal. The RSSI signal that indicates the radio signal intensity is inputted to an A/D converter 103. The A/D converter (indicating “ADC” in Figs. 1 and 3) 103 digitizes the inputted analog signal and outputs a digital ~~ADO~~ Analog Digital Output (ADO) signal or a result signal of the analogue/digital conversion.

Please replace the paragraph on page 5, lines 5 through 23, with the following amended paragraph:

In each of the registers, from the A/D conversion result storage register for the receiving channel-1 111 to the A/D conversion result storage register for the receiving channel-4 114 and from the A/D conversion result storage register for the transmission channel-1 211 to the A/D conversion result storage register for the transmission channel-4 214, which are connected to the A/D converter 103, the ADO, a result signal of the A/D conversion as a digital signal, is inputted and the registers store the inputted signal. These registers, from the A/D conversion result storage register for the receiving channel-1 111 to the A/D conversion result storage register for the receiving channel-4 114 and from the A/D conversion result storage register for the transmission channel-1 211 to the A/D conversion result storage register for the transmission channel-4 214, are timing controlled by timing

signals from LT1 to LT4 and from LT21 to LT24, outputted from a timing control circuit 221. The timing control circuit 221 also outputs a switching signal TXRX that operates a switching control between transmission/receiving status of the radio unit 102. When this switching signal TXRX is "H", the radio unit 102 is at the receiving status and receives the radio signal from the antenna; when the TXRX is "L", the radio unit 102 is at a transmission status and outputs a radio signal from a transmission signal processing circuit, located in radio unit 102, which is not shown in the figure, to the antenna 101.

Please replace the paragraph starting on page 5, line 24, through page 6, line 11, with the following amended paragraph:

The registers, from the A/D conversion result storage register for the receiving channel-1 111 to the A/D conversion result storage register for the receiving channel-4 114 and from the A/D conversion result storage register for the transmission channel-1 211 to the A/D conversion result storage register for the transmission channel-4 214, are connected to CPU 241 via a data bus 231. This CPU 241 compares and assesses the digitized signal indicating the radio signal intensity stored in the registers, from the A/D conversion result storage register for the receiving channel-1 111 to the A/D conversion result storage register for the receiving channel-4 114 and from the A /D conversion result storage register for the transmission channel-1 211 to the A/D conversion result storage register for the transmission channel-4 214. Then, the assessed result is sent to a communication control circuit 242 and the communication control circuit 242 selects a transmission and a receiving channel. In this instance CPU 241 is also connected to the timing control circuit 221, and CPU 241 controls the timing signals from LTI to LT4 and from LT21 to LT24.

Please delete the paragraph on page 6, lines 12 through 14, as follows:

~~In this instance CPU 241 is also connected to the timing control circuit 221, and CPU 241 controls the timing signals from LTI to LT4 and from LT21 to LT24.~~

Please replace the paragraph on page 8, lines 1 through 12, with the following amended paragraph:

Subsequently, ~~not shown in Fig. 2,~~ the CPU 241 compares and assesses the data stored in the registers, the A/D conversion result storage register for the transmission channel- 1 211 to the A/D conversion result storage register for the transmission channel-4 214; selects a channel not used from the transmission channels from CH1 to CH4; and conveys it to the communication control circuit 242. In particular, the CPU 241 assesses the data that does not reach a predetermined level from the data stored in the registers, the A/D conversion result storage register for the transmission channel-1 211 to the A/D conversion result storage register for the transmission channel-4 214, and conveys it to the communication control circuit 242. When the intensity of the radio signal at a certain transmission channel exceeds a predetermined level, other radio apparatus of a similar kind may use the transmission channel in a respectable probability.

Please replace the paragraph on page 8, lines 18 through 23, with the following amended paragraph:

In this instance, the data stored in the registers, the A/D conversion result storage register for receiving channel-1 111 to the A/D conversion result storage register for the receiving channel-4 114, are not used for the selection of the communication channel, but used for monitoring a receiving status in a situation such as a handset of a ~~family-type~~ extension-cordless telephone system where used over distances the radio signal becomes weak.

Please replace the paragraph starting on page 8, line 24, through page 9, line 5, with the following amended paragraph:

After the operation to select the communication channel shown in Fig. 2 is completed, ~~not shown in Fig. 2,~~ in the next frame, the switching signal TXRX returns to the original ~~mode level~~ level ("L" level). The switching signal TXRX becomes "H" level while the period corresponds to the receiving channels and sets the radio unit 102 at the receiving status, on the

other hand, while the period corresponds to the transmission timing, TXRX becomes "L" level and sets the radio unit 102 at the transmission status.

Please replace the paragraph on page 10, lines 14 through 18, with the following amended paragraph:

Next, referring to Fig. 4, the operation of the communication channel selecting circuit corresponding to radio signal intensity according to the second embodiment of the present invention is described. Fig. 4 is a timing chart showing the operation of the communication channel selecting circuit corresponding to radio signal intensity shown in Fig. 3. RSSI, the signal indicating the receiving signal intensity outputted from the radio unit 102, continues outputting during the period the switching signal TXRX is "H" level, because the radio unit 102 is at the transmission status. On the other hand, corresponding to the timing allocated receiving channels from CH1 to CH4 and transmission channels from CH1 to CH4 by the timing signal control circuit 321 controlled by the CPU 341, the timing signals from LT31 to LT34 are sent to the registers, from the channel-1 A/D conversion result storage register 311 to the channel-4 A/D conversion result storage register 314.

Please delete the paragraph starting on page 10, line 19, through page 11, line 1, as follows:

~~RSSI, the signal indicating the receiving signal intensity outputted from the radio unit 102, continues outputting during the period the switching signal TXRX is "H" level, because the radio unit 102 is at the transmission status. On the other hand, corresponding to the timing allocated receiving channels from CH1 to CH4 and transmission channels from CH1 to CH4 by the timing signal control circuit 321 controlled by the CPU 341, the timing signals from LT31 to LT34 are sent to the registers, from the channel-1 A/D conversion result storage register 311 to the channel-4 A/D conversion result storage register 314.~~

Please replace the paragraph on page 12, lines 2 through 8, with the following amended paragraph:

Here, the data indicating receiving signal intensity of the radio signals at the timing allocated to the receiving channels from CH1 to CH4 stored in the registers, the channel-1 A/D conversion result storage register 311 to the channel-4 A/D conversion result storage register 314, is not used for the selection of the communication channel, but rather used for monitoring the receiving status in such a situation as a handset of a ~~family-type-extension~~ cordless telephone system distances and the radio signal becomes weak.